

+

PTO/SB/D8A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449-A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet	1	of	2
-------	---	----	---

**Complete if Known**

Application Number	10/630,248
Filing Date	July 30, 2003
First Named Inventor	Huang et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	CL1943 US NA

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

**Examiner  
Signature**

Date Considered

6/27/06

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**



Please type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

2

of

2

### Complete if Known

Application Number	10/630,248
Filing Date	July 30, 2003
First Named Inventor	Huang et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	CL1943 US NA

### OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
JL		Prime et al., Self-Assembled Organic Monolayers: Model Systems for Studying Adsorption of Proteins at Surfaces, Science, 1991, 252, 5009, 1164-1167	
		Lahiri et al., A Strategy for the Generation of Surfaces Presenting Ligands for Studies of Binding Based on an Active Ester as a Common Reactive Intermediate: A Surface Plasmon Resonance Study, Analytical Chemistry, 1999, February 15, 71(4), 777-790	
		Templeton et al., Redox and Fluorophore Functionalization of Water-Soluble, Tiopronin-Protected Gold Clusters, JACS, 1999, 121, PPG 7081-7089	
		Foos et al., Thiol-Terminated Di-, Tri-, and tetraethylene Oxide Functionalized Gold Nanoparticles: A Water-Soluble, Charge-Neutral Cluster, Chem. Mater. 2002, 14, pp. 2401-2408	
		Templeton et al., Water-Soluble, Isolable Gold Clusters Protected by Tiopronin and Coenzyme a Monolayers, Langmuir 15: 66-76, 1999	
		Chen et al., Poly(N-vinylisobutyramide)-stabilized platinum nanoparticles; synthesis and temperature-responsive behavior in aqueous solution. Colloids and Surfaces A 169: 107-116, 2000	
		Wuelfing et al., Nanometer Gold Clusters Protected by Surface-Bound Monolayers of Thiolated Poly(ethylene glycol), Polymer Electrolyte, J. Am. Chem. Soc. 120* 12696-12697, 1998	
		Chan et al., Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection, Science, 281: pp. 2016-2018, 1998	
		Mitchell et al., Programmed Assembly of DNA Functionalized Quantum Dots, J. Am. Chem. Soc. 121: 8122-8123, 1999	
		Napper, Steric Stabilization, J. Colloid. Interface. Sci 58: 390-407, 1977	
		Prime et al., Adsorption of Proteins onto Surfaces Containing End-Attached Oligo(ethylene oxide): A Model System Using Self-Assembled Monolayers, A.J. Am. Chem. Soc. 1993, 115, 10714-10721	
		Brust et al., Synthesis of Thiol-derivatized Gold Nanoparticles in a Two-phase Liquid-Liquid System, Department of Chemistry, University of Liverpool, UK	
		Zhang et al., Proteins and cells on PEG immobilized silicon surfaces, Biomaterials 19, 1998, 953-960,	
		Otsuka et al., Quantitative and Reversible Lectin-Induced Association of Gold Nanoparticles Modified with $\alpha$ -Lactosyl- $\omega$ -mercapto-poly(ethylene glycol), J. Am. Chem. Soc. 2001, 123, 8226-8230	
		Snow et al., Self-assembly of gold nanoclusters on micro- and nanoelectronic substrates, J. Mater. Chem., 2002, 12, 1222-1230	
		Roberts et al., Using Mixed Self-Assembled Monolayers Presenting RGD and (EG) <sub>3</sub> OH Groups to Characterize Long-Term Attachment of Bovine Capillary Endothelial Cells to Surfaces,	

Examiner  
Signature

*James L.*

Date

Considered

6/27/06

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1448A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet	1	of	2
-------	---	----	---

**Complete if Known**

Application Number	10/630,248
Filing Date	July 30, 2003
First Named Inventor	Huang et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	CL1943 US NA

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature		Date Considered	6/27/06
-----------------------	---	--------------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**

APR 30 2004  
JCT106  
PLEASE type a plus sign (+) inside this box → ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

## Complete if Known

Application Number	10/630,248
Filing Date	July 30, 2003
First Named Inventor	Huang et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	CL1943 US NA

## OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials <sup>4</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
JL		Prime et al., Self-Assembled Organic Monolayers: Model Systems for Studying Adsorption of Proteins at Surfaces, Science, 1991, 252, 5009, 1184-1187	
		Lahiri et al., A Strategy for the Generation of Surfaces Presenting Ligands for Studies of Binding Based on an Active Ester as a Common Reactive Intermediate: A Surface Plasmon Resonance Study, Analytical Chemistry, 1999, February 15, 71(4), 777-790	
		Templeton et al., Redox and Fluorophore Functionalization of Water-Soluble, Tiopronin-Protected Gold Clusters, JACS, 1999, 121, PPG 7081-7089	
		Foos et al., Thiol-Terminated Di-, Tri-, and tetraethylene Oxide Functionalized Gold Nanoparticles: A Water-Soluble, Charge-Neutral Cluster, Chem. Mater. 2002, 14, pp. 2401-2408	
		Templeton et al., Water-Soluble, Isolable Gold Clusters Protected by Tiopronin and Coenzyme a Monolayers, Langmuir 15: 66-76, 1999	
		Chen et al., Poly(N-vinylisobutyramide)-stabilized platinum nanoparticles; synthesis and temperature-responsive behavior in aqueous solution. Colloids and Surfaces A 169: 107-118, 2000	
		Wuelfling et al., Nanometer Gold Clusters Protected by Surface-Bound Monolayers of Thiolated Poly(ethylene glycol), Polymer Electrolyte, J. Am. Chem. Soc. 120: 12696-12697, 1998	
		Chan et al., Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection, Science, 281: pp. 2016-2018, 1998	
		Mitchell et al., Programmed Assembly of DNA Functionalized Quantum Dots, J. Am. Chem. Soc. 121: 8122-8123, 1999	
		Napper, Steric Stabilization, J. Colloid. Interface. Sci 58: 390-407, 1977	
		Prime et al., Adsorption of Proteins onto Surfaces Containing End-Attached Oligo(ethylene oxide): A Model System Using Self-Assembled Monolayers, AJ. Am. Chem. Soc. 1993, 115, 10714-10721	
		Brust et al., Synthesis of Thiol-derivatized Gold Nanoparticles in a Two-phase Liquid-Liquid System, Department of Chemistry, University of Liverpool, UK	
		Zhang et al., Proteins and cells on PEG Immobilized silicon surfaces, Biomaterials 19, 1998, 953-960,	
		Otsuka et al., Quantitative and Reversible Lectin-Induced Association of Gold Nanoparticles Modified with α-Lactosyl-ω-mercapto-poly(ethylene glycol), J. Am. Chem. Soc. 2001, 123, 8226-8230	
		Snow et al., Self-assembly of gold nanoclusters on micro- and nanoelectronic substrates, J. Mater. Chem., 2002, 12, 1222-1230	
		Roberts et al., Using Mixed Self-Assembled Monolayers Presenting RGD and (EG) <sub>3</sub> OH Groups to Characterize Long-Term Attachment of Bovine Capillary Endothelial Cells to Surfaces,	

Examiner Signature		Date Considered	6/27/06
--------------------	--	-----------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**